

CLAIMS

What is Claimed is:

1. Apparatus adapted to be worn by a human being for selectively modifying the temperature of the human being, comprising:

a front panel and a back panel;

5 means for removably securing said panels about a human being such that the front panel contactingly covers approximately the entire forward facing part of the human trunk and the back panel contactingly covers approximately the entire human back region from the shoulders to the waist;

10 each panel includes an air flow layer, a first air impermeable layer substantially covering a first side of the air flow layer facing away from a wearer, and a second air permeable layer substantially covering a second side of the air flow layer generally facing a wearer;

15 means sealing edge portions of the first and second layers to one another except for at least one vent located along a first sealed edge portion of each panel; and

a thermoelectric heat pump interconnected with the front and back panels at a second sealed edge portion for passing a pressurized stream of temperature conditioned air through the respective air flow layers to exit to the ambient via the vents.

2. Apparatus as in claim 1, in which the heat pump is a Stirling cycle device when the conditioned air is being cooled.

3. Apparatus as in claim 1, in which the removable securing means includes at least one strap for receipt over the shoulders of the wearer and at least one further strap extending about the waist of a wearer.

4. Apparatus as in claim 1, in which there are further provided first and second bulletproof protective panels worn by a wearer outside and over the front and back panels respectively.

5. Apparatus adapted to be worn by an individual which simultaneously protects the individual against gunfire and selectively cools or warms the individual, comprising:

a front panel and a back panel;

at least one strap end connected to both panels for receipt over the shoulder allowing the panels to hang downwardly therefrom;

at least one further strap interrelating the panels to one another and securing them transversely;

each panel including in the order described an inner layer facing inwardly toward the individual wearer, an air flow layer, and an outer layer protective against gunfire;

means for sealing the layers of each panel at their outer edges except

for at least one vent; and

a thermoelectric heat pump interconnecting pressurized temperature conditioned air via a manifold to the air flow layer of each panel for passing therethrough and outwardly through the vents to the ambient.

5 6. Apparatus as in claim 5, in which the air vents are of such dimensions as to create a relatively light back pressure within the air flow layers so that the conditioned air spreads throughout the air flow layers.

7. Apparatus worn by a human for conditioning the temperature while providing protection against agents in the ambient which are harmful to touch or breathe, comprising:

an enveloping garment completely enclosing the wearer and preventing access of harmful ambient agents to the garment interior;

first and second panels arranged about the wearer located inside the garment, each panel including an air flow layer; and

15 a thermoelectric heat pump with a first blower emptying waste heat to the exterior of the enveloping garment and a second blower located within the garment recirculating temperature conditioned air through the air flow layers and to the interior of the garment.

8. Apparatus as in claim 7, in which the heat pump operates on a Stirling cycle.